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there are no shoulders, as in tortuous flues, for the soot to lodge upon, and, consequently, the operation of sweeping will not be required nearly so often as with the ordinary chimneys, and the removal of ashes may take place at any distant intervals of time, instead of two or three times a-day; for instead of the ashes being carried through the rooms, they are made to descend the tail-flue, and are thence carried away with the soot.

ON KEENE'S MARBLE CEMENT.

By G. F. WHITE, Esq.

The composition denominated Keene's marble cement, from its novelty and valuable qualities, whether for strictly useful or for decorative purposes, seems to afford advantages which are not supplied by any analogous material in use at the present time.

A cement, having for one of its ingredients marble dust, was, as is well known, used by the ancients for coating the walls and columns of their edifices, and which, in Italy and other genial climates, though exposed to the external air, was found to be by no means inferior in durability to the native marble. But while Keene's cement bears a relation to the ancient stucco in hardness and some other respects, the resemblance does not extend further, as marble does not enter into its composition, neither is it adapted for exterior or hydraulic purposes.

The component parts of Keene's cement are sulphate of lime or gypsum, and sulphate of alumina or alum. The former is, as in the case of plaster, deprived of its water of crystallisation by being baked, and then steeped in a solution of alum-water of given strength; then, by a second process, of being subjected to intense heat, the properties of the two compounds become so intimately mixed and exchanged, that the result is a cement unequalled in hardness and in the delicacy of its nature.

The finer kind of this cement is susceptible of a beautiful polish, and very nearly approaches the appearance of statuary marble. The same degree of hardness and lustre can be obtained in any tint which may desired; and the fact, that the sulphate of lime is the base on which most colours are struck, and that alum is used as a mordant to fix them, affords sufficient proof of its aptitude for the imitation of any description of coloured marble or granite.